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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR      | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|---------------------------|---------------------|------------------|
| 09/824,595  | 04/02/2001  | Randall Scott Springfield | RPS9 2000 0016      | 1231             |
| 47052   | 7590        | 03/11/2005                | EXAMINER            |                  |
| SAWYER LAW GROUP LLP<br>PO BOX 51418<br>PALO ALTO, CA 94303 |             |                           | GYORFI, THOMAS A    |                  |
|   |             |                           | ART UNIT            | PAPER NUMBER     |
|   |             |                           | 2135                |                  |

DATE MAILED: 03/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/824,595

Applicant(s)

SPRINGFIELD ET AL.

Examiner

Tom Gyorfi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Claims 1-12 remain for examination. The correspondence filed 11/8/04 amended claims 1-6.

### ***Response to Arguments***

2. Applicant's arguments filed 11/08/04 have been fully considered but they are not persuasive.

Applicant argues, *"However, Grawrock does not specify precisely how the boot block identifier or the BIOS identifier are obtained. In particular, there is no indication in the cited portions of Grawrock that the source of a particular number of instructions initially executed is identified and determined as constituting the boot source. Instead, the BIOS identifier and boot block identifier of Grawrock are apparently loaded prior to execution or loading of initial instructions. Consequently, Grawrock fails to teach or suggest determining a boot source by determining a source of a number of instructions initially executed as the boot source. Grawrock, therefore, fails to teach or suggest the method and system recited in claims 1 and 6, respectively."* Examiner disagrees with this contention. Grawrock discloses that the boot block memory contains boot block code (i.e. a number of instructions) that are executed at the start of the initialization process (col. 3, lines 39-44). Further, the determination of the boot source occurs during the initialization process, implying that some number of instructions have already been executed by the boot source at the time of the determination (col. 4, lines 25-30).

Similar arguments were presented against the rejections of claims 2-5 and 7-12. The rejections of these claims stand for the reasons cited above.

***Claim Rejections - 35 USC § 102***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1, 4, 6-7, 9, and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Grawrock (U.S. Patent 6,678,833).

Regarding claim 1:

Grawrock discloses a method for evaluating a boot source in a computer system having a processor comprising the steps of:

Determining the boot source used by the processor each time the computer system boots, the determining step further including determining a source of a number of instructions initially executed as the boot source (col. 3, lines 40-45; col. 4, lines 25-30)

Allowing the boot source to be specified once as a known boot source (col. 3, lines 62-67).

Regarding claim 4:

Grawrock teaches the limitations of claim 1 above. In addition, Grawrock also teaches writing an identity of the boot source in a register each time the computer system boots (col. 4, lines 25-30).

Regarding claim 6:

Grawrock discloses a system for evaluating a boot source in a computer system having a processor coupled with a boot source, the system comprising:

A first register for storing an identity of the boot source used by the processor each time the computer system boots, the identity being determined by determining a source of a number of instructions initially executed as the boot source (element 345 of Figure 3; col. 3, lines 40-45; col. 4, lines 25-30); and

a second register for allowing the boot source to be specified once as a known boot source (element 330 of Figure 3; col. 3, lines 62-67).

Regarding claim 7:

Grawrock teaches the limitations of claim 6 above. In addition, Grawrock teaches wherein the computer system includes a bridge coupling the processor with the boot source and wherein the first register and the second register are located in the bridge (col. 3, lines 7-24; Figures 2 and 3).

Regarding claim 9:

Grawrock teaches the limitations of claim 6 above. In addition, Grawrock teaches wherein the known boot source is written only once to the second register (col. 3, lines 62-67).

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Regarding claim 11:

Grawrock teaches the limitations of claim 6 above. In addition, Grawrock teaches wherein the identity of the boot source is capable of checking the boot source stored in the first register to ensure that the boot source is the known boot source

***Claim Rejections - 35 USC § 103***

5. Claims 2-3, 5, 10, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grawrock as applied to claims 1, 6, and 9 above, and further in view of Angelo (U.S. Patent 5,944,821).

Regarding claims 2 and 10:

Grawrock does not explicitly teach that the boot source is a flash boot source. However, Angelo teaches a computer system having a flash ROM containing the BIOS information (Angelo, column 7, lines 30-34). It would be obvious to one of ordinary skill in the art at the time of the invention disclosed by Applicant to utilize a flash ROM containing the BIOS in the invention disclosed by Grawrock. This would allow an authorized user to reprogram the BIOS with relative ease so as to accommodate future revisions of the BIOS.

Regarding claim 3:

As noted above the flash ROM disclosed by Angelo contains BIOS information, but not necessarily information regarding the boot block. However, Grawrock teaches

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that it is possible to embody his invention in a manner such that the entire BIOS may be substituted for the boot block code (Grawrock, column 3, lines 40-47). Thus, it would be obvious to one of ordinary skill in the art at the time of the invention disclosed by Applicant that one could substitute the identifier for the Flash BIOS in place of the boot block identifier. Since it has already been established that the memory location for the boot block identifier can be designated as a write-once memory location (Grawrock, column 3, lines 62-67), the Flash BIOS identifier can then be written once into memory and identified for future boots. Doing so adds extra security by including a potential means for detecting boot block tampering that cannot itself be tampered with.

Regarding claims 5 and 12:

Grawrock recites that the method disclosed in his invention is unable to detect modifications to information regarding the boot process (column 1, lines 45-48). However, Angelo discloses a method by which programs are registered for execution in secure memory contained in a computer system by means of hash identifiers stored in a hash table. For each program that is to be registered, an identifier is generated through a hashing algorithm and stored in a hash table in secure memory (Angelo, column 9, lines 3-12). Note that the means to generate an identifier are equivalent between the two patents (Angelo, column 9, lines 35-45; Grawrock, column 2, lines 40-46). When a user wishes to execute a program on the computer system as disclosed by Angelo, a hash signature of the program in its present form is generated, and the computer system compares it to the stored hash signature of the program as it was registered. If

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the signatures match, the program is allowed to run (Angelo, column 10, lines 16-26).

Therefore, it would be obvious to one of ordinary skill in the art at the time of the invention to incorporate the act of comparing two hash values for equality as disclosed in Angelo into the system disclosed by Grawrock. Recall that the BIOS identifier can be used in place of the boot block identifier, as noted in the rejection of claim 3. Thus, one of ordinary skill in the art at the time of the invention could store the known value of the BIOS in the boot block identifier memory location and current value of the BIOS in the BIOS identifier memory location. It would then be obvious to one of ordinary skill in the art at the time of the invention to compare the contents of those two memory locations at startup to verify that the current boot source is the known boot source. In this manner, one can detect modifications to information regarding the boot process, thus correcting a known flaw in the invention disclosed by Grawrock and also providing for a more secure computer platform.

6. Claim 8 is rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Grawrock, in view of the articles "VIA's New South Bridge: VT82C686B Supporting UltraATA/100", by Patrick Schmid, published October 26, 2000 (henceforth "VIA"); and "Intel Pentium III i815e Motherboard Shootout", by Mickey Sethi, published December 8, 2000 (henceforth "Pentium").



Regarding claim 8:

Grawrock teaches all the limitations of claim 7 above. Further, Grawrock discloses that the bridge is an ICH, which is known in the art as a south bridge (element 140 of Figure 1; col. 3, lines 18-24).

Evidence for the assertion that an ICH as disclosed by Grawrock is identical to a south bridge is found in the supplementary references Pentium (page 1, paragraph 4, "Introduction") and VIA (page 2, paragraph 3, "Chipsets Basics"). For purposes of a 103(a) rejection, it would have been obvious to one of ordinary skill in the art at the time the invention was made to refer to the ICH disclosed in Grawrock as a south bridge, so as not to limit the applicability of the Grawrock invention to computers using components made by only one specific manufacturer.

### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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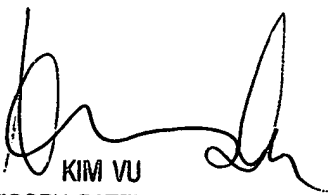
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom Gyorfi whose telephone number is (571) 272-3849. The examiner can normally be reached on 8:00am - 4:30pm Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on (571) 272-3859. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TAG  
3/8/05

  
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